

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Status of the Claims and Explanation of Amendments

Claims 1-34 were pending. A telephone restriction was issued, which divided the claims as follows:

<u>Group</u>	<u>Description</u>
I	Claims 1-24, allegedly drawn to a method of making a solid electrolyte wherein the porous membrane is fully impregnated, classified in class 264, subclass 349.
II	Claims 25-34, allegedly drawn to a method of preparing a substantially air occlusive integral composite membrane with a microstructure of micro pores wherein said micropores are sufficiently filled with ion exchange resin, classified in class 427, subclass 115.

During a March 28, 2007 teleconference, Applicants elected Group II (claims 25-34). By this paper, claims 1-24 are cancelled without prejudice or disclaimer.

In addition, new dependent claims 35-42 are added, which describe further aspects of the method. Support for these claims is found throughout the application as originally filed. For example, dependent claims 35-37 relate to the use of a surfactant in the ion exchange resin as described at page 6 (and elsewhere in the specification). No new matter will be added to this application by entry of these claims.

As to matters of form, claims 25-34 were rejected under 35 U.S.C. § 112 allegedly as being indefinite. [5/16/07 Office Action, at p. 3]. The office action found the language “each major surface” in independent claim 25 to be unclear, and interpreted this language to refer to “the surface of a membrane.” [5/16/07 Office Action, at p. 3].

Gore asserts that claim 25, as a whole, reasonably apprises one of ordinary skill in the art of its scope and, therefore complies with Section 112, second paragraph. MPEP § 2173.02. Nonetheless, in an effort to expedite prosecution of this application and without prejudice, claim 25 has been amended to avoid the usage of the allegedly unclear phrase. Instead, claim 25 now recites that the polymeric support has “a pair of opposing sides” that “defin[e] a thickness of at most one mil.” These amendments are not made for any substantial reason related to patentability (§§102, 103). Support for these amendments can be found throughout the application as originally filed, including for example pages 7, 9, 13-16 and Figure 1. No new matter will be added to this application by entry of these amendments, which is request. Withdrawal of the Section 112 rejection is respectfully requested.

As to the merits, two rejections were made. First, claims 25-30 and 32-34 were rejected pursuant to 35 U.S.C. § 102 (a) as allegedly being anticipated by Japanese Laid-Open Application. No. H6-29032 to Oka et al. (“Oka”). [5/15/07 Office Action pp. 3-5]. Second, claim 31 was rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over Oka in light of Japanese Laid-Open Application No. 64-22932 to Saeki et al. (“Saeki”). [5/15/07 Office Action p. 5].

B. Claims 25-34 are Patentably Distinct from the Cited References

The rejections of claims 25-34 are traversed. The requirements for such rejections are not met because Oka and Saeki, taken alone or in combination, fail to teach disclose or suggest each of the claim limitations. In particular, these references do not disclose applying ion exchange resin to each of the opposing sides of the membrane.

Specifically, claim 25 recites:

“25. A method of preparing a substantially air occlusive integral composite membrane comprising:

- (a) providing a polymeric support having a pair of opposing sides and a microstructure of micropores between the opposing sides, and the opposing sides defining a thickness of at most one mil;
- (b) applying ion exchange resin solution to each of the opposing sides of said polymeric support;

whereby said micropores are sufficiently filled with ion exchange resin to form an air occlusive integral composite membrane which has an ionic conductance rate of at least 5.1 $\mu\text{mhos/min.}$ ”

Oka is directed to a macromolecular electrolyte film, which is allegedly produced by: (1) drawing a macromolecular film, (2) “impregnating” the drawn film with a solution of ion exchange resin, and (3) removing the solvent. [Oka translation at ¶0006]. However, there is no description of how the impregnation allegedly is achieved. For example, Oka describes the impregnation process as follows:

“The macromolecular electrolyte film of this invention is preferably produced by impregnating the macromolecular porous film with a solution of ion exchange resin, and then drying it and affixing the ion exchange resin to the macromolecular porous film.” [Oka translation at ¶0006].

In this regard, the office action asserts that paragraph 15 of the Oka translation describes step (b) of Applicants’ claim 25. [5/16/07 Office Action at p. 3]. That paragraph is in Oka’s “Implementation examples” section, and describes that a polytetrafluoroethylene film “was impregnated with a 5 wt % solution of perfluorocarbon sulfonate ... in isopropyl alcohol” [Oka translation at ¶0015]. Importantly, that disclosure (alone or taken in combination with the balance of Oka) does not describe application of the ion exchange resin solution to both of the opposing sides of the porous starting film. Accordingly, Oka fails to teach, disclose or suggest “applying ion exchange resin solution to each of the opposing sides of said polymeric support” as recited in Applicants’ claim 25.

Saeki is cited by the Office Action in connection with dependent claim 31, and is alleged to disclose a chlorinated polymeric support. The office action does not allege that Saeki teaches, discloses or suggests “applying ion exchange resin solution to each of the opposing sides of said polymeric support” as recited in Applicants’ claim 25.

Accordingly, as Applicants cannot find the applying step of independent claim 25 in Oka or Saeki, at least that claim is respectfully asserted to be in condition for allowance. Dependent claims 26-34 as well as new dependent claims 35-42 are believed to be patentable for at least similar reasons.

Applicants have chosen, in the interest of expediting prosecution of this patent application, to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Likewise, Applicants have chosen not to swear behind Oka cited by the office action or to otherwise submit evidence to traverse the rejection at this time. Applicant, however, reserves the right, as provided by 37 C.F.R. §§ 1.131 and 1.132, to do so in the future as appropriate. Finally, Applicants have not specifically addressed the rejections of the dependent claims. Applicants respectfully submit that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

Appl. No. 10/675,992
Paper dated August 16, 2007
Reply to Office Action dated May 16, 2007

CONCLUSION


This application is respectfully asserted to be in condition for allowance for the above-stated reasons. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 0769-4582US6.

Respectfully submitted,
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By: _____


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